

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Donovan

Serial Number: 09/371354

Filed: August 10, 1999

For: INTRAPERICARDIAL BOTULINUM TOXIN
TREATMENT FOR BRADYCARDIA

) Examiner: B. Bunne

) Art Unit: 1647

) Irvine, California

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DECLARATION UNDER 37 C.F.R. SECTION 1.132

I, MITCHELL F. BRIN, declare as follows:

1. I am over the age of twenty one, competent to testify in a court of law, and could and would testify to the matters set forth below before the United States Patent and Trademark Office, if required to do so.

2. I understand that this declaration will be used to assist prosecution of United States patent application serial number 09/371,354 (or a continuation or continuation in part of that patent application), including to assist to overcome a rejection in the October 18, 2002 office action in serial number 09/371,354.

3. I graduated from the University of Pennsylvania in 1975 with a bachelor of arts in biology (Magna Cum Laude and Phi Beta Kappa) and I received an M.D. degree from the Columbia College of Physicians and Surgeons. I completed neurology and fellowship training at the Columbia University Neurological Institute. In 1994, I joined the Mount Sinai Medical Center as an Associate Professor and Director of the Movement Disorders Program.

4. I was most recently, attending Physician and Associate Professor of Neurology at the Mount Sinai School of Medicine in New York where I also served as Director of Movement Disorders and held the Bachmann-Strauss Endowed Chair in Neurology. I have directed numerous neurological research

programs relating to use of a botulinum toxin in the treatment of movement disorders, such as dystonia.

5. I was one of the first investigators to examine the use of botulinum toxin for the treatment of medical disorders and I pioneered the use of botulinum toxin for the treatment of dystonias, including blepharospasm and other debilitating neurological disorders. I have designed and conducted double blind studies examining the use of botulinum toxin for numerous conditions, and have conducted a number of multicenter studies for uses of botulinum toxin.

6. I founded the American Academy of Neurology course on botulinum toxin, and I have organized numerous courses and symposia on botulinum toxin, and has published extensively on this subject.

7. I hold many appointments and affiliations, including as past President and Founder of WE MOVE, an international professional and patient educational not-for-profit organization that focuses on movement disorders. I also serve on the board of directors of the Bachmann-Strauss Dystonia and Parkinson Foundations and the Exceptional Parent Foundation. I am the acting chair of neurology review board of the United States Pharmacopoeia Convention. I am a member of the American Academy of Neurology Section on Movement Disorders and Co-Founder of the Dystonia Study Group.

8. I also serve on the editorial and peer-review boards of numerous scientific journals. I am the recipient of many awards including being elected a Fellow to the American Academy of Neurology; recipient of the FDA's Commissioner's Special Citation for my work with neurological movement disorders; and a Distinguished Service and Honor Award from the American Academy of Otolaryngology-Head & Neck Surgery Society.

10. A partial list of my publications is attached to this declaration as Appendix A. These publications include Jankovic J, and Brin M., *Therapeutic Uses of Botulinum Toxin*, New Eng J. Med, 1186-1194;1991.

11. By training and experience I am an expert in the therapeutic use of the botulinum toxins.

12. I am currently employed by Allergan, Inc, the assignee of the above-identified patent application, as Vice President, *Botox*®/Neurology. In this capacity, I oversee the *Botox*® (botulinum toxin type A purified neurotoxin complex) development portfolio, and direct clinical programs for uses of the botulinum toxins.

13. I have carefully and thoroughly read U.S. patent application serial number 09/371,354. In my opinion this patent application provides sufficient disclosure and teaching so that a physician of ordinary skill can successfully treat bradycardia by intrapericardial injection of a botulinum toxin to the heart of a patient with bradycardia, to thereby increase the heart rate of a patient with bradycardia.

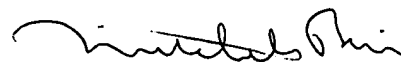
14. The conclusion in paragraph 13 above is based on the following well known facts: (1) the heart receives sympathetic and parasympathetic innervation (see e.g. page 1, lines 15-16 of the patent application); (2) sympathetic (adrenergic) stimulation of the heart increases heart rate (see e.g. page 1, line 16 of the patent application); (3) parasympathetic (cholinergic/vagal) stimulation of the heart decreases heart rate (see e.g. forth at page 1, lines 17-18 of the patent application); (4) local administration of botulinum toxin causes a reversible inhibition of acetylcholine release from cholinergic nerve terminals (see e.g. page 13, lines 1-6 of the patent application).

15. Hence it is reasonable to conclude, as set forth at page 22, lines 18-24 of the patent application, that for a patient with bradycardia, vagal nerve inhibition and hence an increase in heart rate can be accomplished by intrapericardial injection of a botulinum toxin to the heart of a patient with bradycardia. Indeed, medical researchers have recently published a study (Masato T., et al., *Botulinum neurotoxin A blocks cholinergic ganglionic neurotransmission in the dog heart*, Jpn J Pharmacol 2002;89(3):249-254) wherein it was demonstrated that administration of a botulinum toxin to the sinoatrial node of dog heart blocks parasympathetic (i.e. cholinergic) mediated bradycardia, and I am in agreement with their conclusion that this foreshadows clinical use of botulinum toxin to treat bradycardia, as set forth in this patent application.

16. Additionally, in my opinion matters such as the specific time period in which the toxin should be administered or for how long, and the specific dosage of the botulinum toxin to use entail consideration of factors such as the patient's size, weight, age, and disease severity which factors are routine considerations determined on a patient by patient basis by the treating physician who has knowledge of the therapeutic use of a botulinum toxin.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that any such willful false statements may jeopardize the validity of the above-identified application or any patent issuing therefrom.

Executed this 14th day of February, 2003, at Irvine, California.



Mitchell F. Brin

ATTACHMENT A

PUBLICATIONS OF MITCHELL F. BRIN

A. Original, Peer Reviewed Reports:

1. Wormser GP, Donath J, Kennish A, Brin MF, Sanders M. Fatal pneumonia. *NYS J Med* 1981;1088-1089.
2. †Brin MF, Fetell MR, Green PHA, Kayden HJ, Hays AP, Behrens MM, Baker H. Blind loop syndrome, vitamin E malabsorption, and spinocerebellar degeneration. *Neurology* 1985;35:338-342.
3. Bressman S, Fahn S, Eisenberg M, Brin M, Maltese W. Biotin-responsive encephalopathy with myoclonus, ataxia, and seizures. *Adv Neurology* 1985;43:119-125
4. Lange DJ, Warner C, Brin M, List T, Fahn S, Lovelace RE. Botulinum toxin therapy: distant effects on neuromuscular transmission. *Muscle Nerve* 1985;8:624-625.
5. Blitzer A, Lovelace RE, Brin MF, Fahn S, Fink ME. Electromyographic findings in focal laryngeal dystonia (spastic dysphonia). *Ann Oto, Rhino, and Laryngoscope* 1985; 94:591-594.
6. † Brin MF, Pedley TA, Lovelace RE, Emerson RG, Gouras P, MacKay C, Kayden HJ, Levy J, Baker H. Electrophysiological features of abetalipoproteinemia: functional consequences of vitamin E deficiency. *Neurology* 1986; 36:669-673.
7. Breakefield XO, Bressman SB, Kramer PL, Ozelius LO, Moskowitz C, Tanzi R, Brin MF, Hobbs W, Kaufman D, Kidd KK, Fahn S, Gusella J. Linkage analysis in a family with dominantly inherited torsion dystonia: Exclusion of the pro-opiomelanocortin and glutamic acid decarboxylase genes, and other chromosomal regions using DNA polymorphisms. *J Neurogenetics* 1986;3:159-175.
8. Burke RE, Brin MF, Fahn S, Bressman SB, Moskowitz C. An analysis of the clinical course of non-Jewish autosomal dominant torsion dystonia. *Movement Disorders* 1986;1:163-178.
9. Blitzer A, Brin MF, Fahn S, Lange D, Lovelace RE. Botulinum toxin for the treatment of spastic dysphonia. *Laryngoscope* 1986;96:1300-1301.
10. Lange DJ, Brin M, Warner C, Fahn S, Lovelace RE. Distant effects of local injections of botulinum toxin. *Muscle Nerve* 1987;10:552-555.

11. † Brin MF, Fahn S, Moskowitz CB, Blitzer A, Friedman A, Shale HM, Greene PE, List T, Lange D, Lovelace RE, McMahon D. Localized injections of botulinum toxin for the treatment of focal dystonia and hemifacial spasm. *Movement Disorders* 1987;2:237-254.
12. de Yebenes JG, Brin MF, Mena MA, De Felipe C, del Rio MR, Bazan E, Martinez A, Fahn S, del Rio J, Vazquez A. Neurochemical findings in neuroacanthocytosis. *Movement Disorders* 1988;3:300-312.
13. Blitzer AB, Brin MF, Fahn S, Lovelace RE. Localized injections of botulinum toxin for the treatment of focal laryngeal dystonia (spastic dysphonia). *Laryngoscope* 1988;98:193-197.
14. Blitzer AB, Brin MF, Fahn S, Lovelace RE. Clinical and laboratory characteristics of laryngeal dystonia: A study of 110 cases. *Laryngoscope* 1988; 98:636-640.
15. Vatassery GT, Brin MF, Fahn S, Kayden HJ, Traber MG. Effect of high doses of dietary vitamin E on concentrations of vitamin E in several brain regions, plasma, liver and adipose tissue. *J Neurochem* 1988;51:621-623.
16. Kaplan JG, Pack MD, Horoupian D, DeSouza T, Brin MF, Schaumburg H. Distal axonopathy associated with chronic gluten enteropathy: A treatable disorder. *Neurology* 1988;38:642-645.
17. Younger DS, Chou S, Hays AP, Lange DJ, Emerson R, Brin MF, Thompson H, Rowland, LP. Primary lateral sclerosis: A clinical diagnosis re-emerges. *Arch Neurol* 1988;45:1304-7.
18. Blitzer A, Brin MF, Fahn S. Botulinum toxin injection for the treatment of oromandibular dystonia. *Ann Oto Rhino Laryngol* 1989;98:93-97.
19. † Brin MF, Blitzer A, Fahn S, Gould W, Lovelace RE. Adductor laryngeal dystonia (spastic dysphonia): Treatment with local injections of botulinum toxin (BOTOX). *Movement Disorders* 1989;4:287-296.
20. Ozelius L, Kramer PL, Moskowitz CB, Kwaitkowski J, Brin MF, Bressman SB, Schuback DE, Falk CT, Risch N, de Leon D, Burke RE, Haines J, Gusella JF, Fahn S, Breakefield XO. Human gene for torsion dystonia located on chromosome 9q32-q34. *Neuron* 1989;2:1427-1434.
21. Bressman SB, de Leon D, Brin MF, Risch N, Burke RE, Greene PE, Shale H, Fahn S. Idiopathic dystonia among Ashkenazi Jews: Evidence for autosomal dominant inheritance. *Ann Neurol* 1989;26:612-620.

*: Publication subsequent to promotion to Professor

22. † Brin MF, Fahn S, Loftus S, McMahon D, Flaster E. Relationship between dose of vitamin E administered and blood level. *Ann NY Acad Sci* 1989;570:421-424.
23. Parkinson Study Group. DATATOP: A multi-center controlled clinical trial in early Parkinson's disease, *Archives of Neurology* 1989; 46:1052-1060.
24. Parkinson Study Group. Effect of deprenyl on the progression of disability in early Parkinson's disease. *New England Journal of Medicine* 1989; 321:1364-1371.
25. Kramer PL, de Leon D, Ozelius L, Risch N, Brin MF, Bressman SB, Burke RE, Kwiattkowski DJ, Schuback DE, Shale H, Gusella JF, Breakefield XO, Fahn S. Dystonia gene in Ashkenzi Jewish population located on chromosome 9q32-34. *Ann Neurol* 1990;27:114-120.
26. Greene P, Kang U, Fahn S, Brin MF, Moskowitz C, Flaster. Double-blind, placebo controlled trial of botulinum toxin injection for the treatment of spasmodic torticollis. *Neurology* 1990;40:1213-1218.
27. Risch NJ, Bressman SB, de Leon D, Brin MF, Burke RE, Greene PE, Shale H, Claus E, Cupples LA, Fahn S. Segregation analysis of idiopathic torsion dystonia in Ashkenazi Jews suggests autosomal dominant inheritance. *Am J Hum Genet* 1990;46:533-538.
28. † American Academy of Neurology. Assessment: The clinical usefulness of botulinum toxin-A in treating neurological disorders; Report of the Therapeutics and Technology Assessment Subcommittee Committee of the American Academy of Neurology. (MF Brin, Facilitator of report) *Neurology*, 1990;40:1332-1336.
29. American Academy of Otolaryngology-Head and Neck Surgery. Academy policy statement: Botox for spasmodic dysphonia. *AAO-HNS Bulletin* 1990;9:8.
30. Jankovic J, McDermott M, Carter J, Gauthier S, Goetz C, Golbe L, Huber S, Koller W, Olanow C, Shoulson I, Stern M, Tanner C, Weiner W and the Parkinson Study Group. Variable expression of Parkinson's disease: a base-line analysis of the DATATOP cohort. *Neurology* 1990; 40:1529-1534.
31. Saint-Hilaire MH, Burke RE, Bressman SB, Brin MF, Fahn S. Delayed onset dystonia due to perinatal or early childhood asphyxia. *Neurology*, 1991;41:216-222.
32. Blitzer A, Brin MF. Laryngeal dystonia: a series with botulinum toxin therapy. *Ann Oto Rhino Laryngol* 1991; 100:85-89.

*: Publication subsequent to promotion to Professor

33. Lange DJ, Rubin M, Greene PE, Kang UJ, Moskowitz CB, Brin MF, Lovelace RE, Fahn S. Distant effects of locally injected botulinum toxin: A double-blind study of single fiber EMG changes. *Muscle Nerve* 1991;14:672-675.
34. Jankovic J, Brin MF. Therapeutic applications of botulinum toxin. *NEJM* 1991;324:1186-1194.
35. Kwaitkowski DJ, Nygaard TG, Schuback DE, Perman S, Trugman JM, Bressman SB, Burke RE, Brin MF, Ozelius L, Breakefield XO, Fahn S and Kramer PL. Identification of a highly polymorphic microsatellite VNTR within the argininosuccinate synthetase locus: exclusion of the dystonia gene on 9q32-34 as the cause of dopa-responsive dystonia in a large kindred. *Am J Hum Genet* 1991;48:121-128.
36. Chan J, Brin MF, Fahn S. Idiopathic cervical dystonia: clinical characteristics. *Movement Disorders* 1991;6:119-126.
37. Glickman RM, Glickman JN, Magun A, Brin M. Apolipoprotein synthesis in normal and abetalipoproteinemic intestinal mucosa. *Gastroenterology* 1991;101:749-755.
38. Schuback D, Kramer P, Ozelius L, Holmgren G, Forsgren L, Kyllerman M, Wahlstrom J, Craft CM, Nygaard T, Brin MF, de Leon D Bressman S, Moskowitz CB, Burke RE, Sanner G, Drugge U, Gusella J, Fahn S and Breakefield XO. Dopamine beta-hydroxylase gene excluded in four subtypes of hereditary dystonia. *Hum Genet* 1991;87:311-316.
39. Ozelius L, Kramer P, de Leon D, Risch N, Bressman S, Schuback D, Brin MF, Kwaitkowski D, Burke R, Gusella JF, Fahn S, Breakefield XO. Strong allele association between ASS allele and torsion dystonia gene (DYT1) and loci on chromosome 9q34 in Ashkenazi Jews. *Am J Hum Genet* 1992;50:619-628.
40. Blitzer A, Brin MF, Stewart C, Aviv JE, Fahn S. Abductor laryngeal dystonia: a series treated with botulinum toxin. *Laryngoscope* 1992;102: 163-167.
41. LeWitt PA, Galloway MP, Matson W, Milbury P, McDermott M, Srivastava DK, Oakes D, and the Parkinson Study Group. Markers of dopamine metabolism in Parkinson's disease. *Neurology* 1992; 42:2111-2117.
42. Furman JMR, Baloh RW, Barin K, Hain TC, Herdman S, Konrad HR, Parker SW, Van den Noort S, Altrocchi PH, Brin MF, Ferguson JH, Hanley DF, Jacobs LD, Lange DJ, Markham CH, Nuwer MR, Tindall RS, Okagaki JF. Assessment - Posturography - Report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. *Neurology* 1993;43:

*: Publication subsequent to promotion to Professor

1261-1264.

43. Blitzer A, Brin MF, Keen MS, Aviv JE. Botulinum toxin for the treatment of hyperfunctional lines of the face. *Arch Otolaryngol Head Neck Surg* 1993;119:1018-1022.
44. † Hurowitz GI, Silver JM, Brin MF, Williams DT, Rowland LP, Johnson WG. Neuropsychiatric aspects of adult onset Tay-Sachs disease: two case reports with several new findings. *J Neuropsychiatry Clin Neurosci* 1993;5: 30-36.
45. † Borg-Stein J, Pine ZM, Miller JR, Brin MF. Botulinum toxin for the treatment of spasticity in multiple sclerosis. *Am J Phys Med Rehabil* 1993;72:364-368.
46. Parkinson Study Group. Effects of tocopherol and deprenyl on the progression of disability in early Parkinson's disease. *New England Journal of Medicine* 1993; 328:176-183.
47. Parkinson Study Group. A controlled clinical trial of lazabemide (Ro 19-6327) in untreated Parkinson's disease. *Ann Neurol* 1993; 33:350-356.
48. Adler CH, Wrabetz L, Brin MF, Hurtig HI. Cerebellar ataxia, dystonia, and tremor within a family: variable phenotypes of a single genetic disorder? *Movement Disorders* 1994;9:155-160.
49. Bressman SB, Heiman GA, Nygaard TG, Ozelius LJ, Hunt A, Brin MF, Gordon MF, Moskowitz CB, de Leon D, Burke RE, Fahn S, Risch NJ, Breakefield XO, Kramer PL. A study of idiopathic torsion dystonia in a non-Jewish family: evidence for genetic heterogeneity. *Neurology* 1994;44:283-287.
50. Bressman SB, Hunt AL, Heiman GA, Brin MF, Burke RE, Fahn S, Trugman JM, de Leon D, Kramer PL, Wilhelmsen KC, Nygaard T. Exclusion of the DYT1 locus in a non-Jewish family with early-onset dystonia. *Mov Disord* 1994;9:626-32
51. Grillone GA, Blitzer A, Brin MF, Annino DJ, Saint Hilaire MH. Treatment of adductor laryngeal breathing dystonia with botulinum toxin. *Laryngoscope* 1994;104:30-32.
52. † Keen M, Blitzer A, Aviv J, Binder W, Prystowsky J, Smith H, Brin MF. Botulinum Toxin for hyperkinetic facial lines: results of a double blind placebo controlled study. *Plast Reconstr Surg* 1994;94:94-99.
53. † Brin MF, Stewart C, Blitzer A, Diamond B. Laryngeal botulinum toxin (BTX) injections for disabling stuttering in adults. *Neurology*, 1994;44:2262-2266.

*: Publication subsequent to promotion to Professor

54. † Brin MF, Anderson RL, Blitzer AB, Carruthers A, Comella C, Consky E, Dubinsky R, Fahn S, Brueh BR, Hallett M, Jankovic J, Koman A, Kraft SP, Lang A, Ludlow C, Namerow NS, Rhew K, Simpson LL, Tsui J, Waters C, Woodson G. Training guidelines for the use of botulinum toxin for the treatment of neurologic disorders: Report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. *Neurology* 1994;44:2401-2403.
55. The Parkinson Study Group. A controlled trial of lazabemide (RO 19-6327) in levodopa treated Parkinson's disease. *Arch Neurol* 1994; 51:342-347.
56. Kieburtz K, McDermott M, Como P, Growdon J, Brady J, Carter J, Huber S, Kanigan B, Landow E, Rudolph A, Saint-Cyr J, Stern Y, Tennis M, Thalen J, Shoulson I and the Parkinson Study Group. The effect of deprenyl and tocopherol on cognitive performance in early untreated Parkinson's disease. *Neurology* 1994; 44:1756-1759.
57. † Braun N, Abd A, Baer J, Blitzer A, Stewart C, Brin M. Dyspnea in dystonia. A functional evaluation. *Chest* 1995;107:1309-16.
58. † Mezaki T, Kaji R, Kohara N, Fujii H, Katayama M, Shimizu T, Kimura J, Brin MF. Comparison of therapeutic efficacies of type A and F botulinum toxins for blepharospasm: a double-blind, controlled study. *Neurology* 1995;45:506-8.
59. † Stewart C, Winfield L, Hunt A, Bressman SB, Fahn S, Blitzer A, Brin MF. Speech dysfunction in early Parkinson's disease. *Mov Disord* 1995;10:562-565.
60. Blitzer A, Komisar A, Baredes S, Brin MF, Stewart C. Voice failure after tracheoesophageal puncture: Management with botulinum toxin. *Otolaryngol Head Neck Surg* 1995;113:668-670.
61. Parkinson Study Group. Cerebrospinal fluid homovanillic acid in the DATATOP study on Parkinson's disease. *Arch Neurol* 1995; 52:237-245.
62. Adler CH, Zimmerman RS, Lyons MK, Simeone F, Brin MF. Perioperative use of botulinum toxin for movement disorder-induced cervical spine disease. *Mov Disord* 1996;11:79-81.
63. Altrocchi PH, Brin M, Ferguson JH, Goldstein, M.L.; Gorelick, P.B.; Hanley, D.F.; Lange, D.J.; Nuwer, M.R.; Van den Noort, S. Assessment of brain SPECT - Report of the Therapeutics and Technology Assessment Subcommittee of the American Academy of Neurology. *Neurology* 1996;46:278-285.

*: Publication subsequent to promotion to Professor

64. Ford B, Greene P, Louis ED, Petzinger G, Bressman SB, Goodman R, Brin MF, Sadiq S, Fahn S. Use of intrathecal baclofen in the treatment of patients with dystonia. *Arch Neurol* 1996; 53:1241-1246.
65. Kurlan R, Brin MF, Fahn S. Movement disorder in reflex sympathetic dystrophy: A case proven to be psychogenic by surveillance video monitoring. *Mov Disord* 1997;12:243-245.
66. † Stewart CF, Allen EL, Tureen P, Diamond BE, Blitzer A, Brin MF. Adductor spasmodic dysphonia: standard evaluation of symptoms and severity. *J Voice* 1997;11:95-103.
67. Blitzer A, Brin MF. Use of botulinum toxin for diagnosis and management of cricopharyngeal achalasia. *Oto-Head Neck Surg* 1997;116:328-330.
68. † Blitzer A, Binder WJ, Aviv JE, Keen MS, Brin MF. The management of hyperfunctional lines with botulinum toxin: A collaborative study of 210 injection sites in 162 patients. *Arch Otolaryngol* 1997;123:389-392.
69. Bressman SB, deLeon D, Raymond D, Greene PE, Brin MF, Fahn S, Ozelius LJ, Breakefield XO, Kramer PL, and Risch NJ. Secondary dystonia and the DYT1 gene. *Neurology* 1997;48(6):1571-7.
70. Lew,M.F.; Adornato,B.T.; Duane,D.D.; Dykstra,D.D.; Factor,S.A.; Massey,J.M.; Brin,M.F.; Jankovic,J.; Rodnitzky,R.L.; Singer,C.; Swenson,M.R.; Tarsy,D.; Murray,J.J.; Koller,M.; Wallace,J.D. Botulinum toxin type B (BotB): A double-blind, placebo-controlled, safety and efficacy study in cervical dystonia. *Neurology* 1997;49:701-707.
71. Ozelius,L.J.; Hewett,J.; Kramer,P.; Bressman,S.B.; Shalish,C.; deLeon,D.; Rutter,M.; Risch,N.; Brin,M.F.; Markova,E.D.; Limborska,S.A.; IvanovaSmolenskaya,I.A.; McCormick,M.K.; Fahn,S.; Buckler,A.J.; Gusella,J.F.; Breakefield,X.O. Fine localization of the torsion dystonia gene (DYT1) on human chromosome 9q34: YAC map and linkage disequilibrium. *Genome Res.* 1997;7:483-94.
72. Ozelius LJ, Hewett JW, Page CE, Bressman SB, Kramer PL, Shalish C, de Leon D, Brin MF, Raymond D, Corey DP, Fahn S; Risch NJ; Buckler AJ; Gusella JF; Breakefield XO. The early onset torsion dystonia gene (DYT1) encodes an ATP-binding protein. *Nat.Gen.* 1997;17:40-8.
73. Rubio,J.P.; Danek,A.; Stone,C.; Chalmers,R.; Wood,N.; Verellen,C.; Ferrer,X.; Malandrini,A.; Fabrizi,G.M.; Manfredi,M.; Vance,J.; Pericak-Vance,M.; Brown,R.; Rudolf,G.; Picard,F.; Alonso,E.; Brin,M.; Nemeth,A.H.; Farrall,M;

*: Publication subsequent to promotion to Professor

- Monaco,A.P. Chorea-acanthocytosis: genetic linkage to chromosome 9q21. *Am.J.Hum.Genet.* 1997;61:899-908.
74. Almasy,L.; Bressman,S.B.; Kramer,P.L.; Greene,P.E.; Heiman,G.A.; Ford,B.; Yount,J.; Raymond,D.; de Leon,D.; Chouinard,S.; Saunders-Pullman,R.; Brin,M.F.; Kapoor,R.P.; Jones,A.C.; Shen,H.; Fahn,S.; Risch,N.J.; Nygaard,T.G. Idiopathic torsion dystonia linked to chromosome 8 in two Mennonite families. *Ann.Neurol.* 1997;42:670-673.
 75. Kiebertz, K., Shoulson, I., McDermott, M., Fahn, S., Lang, A., Olanow, W., Penney, J., Wooten, G. F., Kurlan, R., Gardiner, I., Petzinger, G., Brin, M., Dillon, S., Shannon, K., Jaglin, J. A., Trosch, R., Mistura, K., Harrison, M., RostRuffner, E., Tanner, C., Singer, C., Weiner, W., Sheldon, C., Grimes, J. D., Gray, P., Hurtig, H., Hauser, R., Gauger, L., Rajput, A., Rudnitzky, R., Dobson, J., Panisset, M., Gauthier, S., Amyot, D., Perlmuter, J., Hubble, J., Barter, R., Suchowersky, O., Lew, M., Welsh, M., Marek, K., Fussell, B., Sethi, K., Ligon, K., Rao, J., Rudolph, A., Casaceli, C., Day, D., Johnston, K., and et al. Safety and efficacy of pramipexole in early Parkinson disease: A randomized dose-ranging study. *Journal of American Medical Association* 278(2), 125-130. 1997.
 76. Binder WJ, Blitzer A, Brin MF. Treatment of hyperfunctional lines of the face with botulinum toxin A. *Dermatol.Surg.* 1998;24:1198-1205.
 77. Blitzer A, Brin MF, Stewart CF. Botulinum toxin management of spasmodic dysphonia (laryngeal dystonia): a 12-year experience in more than 900 patients. *Laryngoscope* 1998;108:1435-1441.
 78. Klein C, Brin MF, de Leon D, Limborska SA, Ivanova-Smolenskaya IA, Bressman SB, Friedman A, Markova ED, Risch NJ, Breakefield XO, Ozelius LJ. De novo mutations (GAG deletion) in the DYT1 gene in two non-Jewish patients with early-onset dystonia. *Hum.Mol.Genet.* 1998;7:1133-1136.
 79. Klein C, Page CE, LeWitt P, Gordon MF, de Leon D, Awaad Y, Breakefield XO, Brin MF, Ozelius LJ. Genetic analysis of three patients with an 18p- syndrome and dystonia. *Neurology* 1999;52:649-651.
 80. Klein C, Brin MF, Kramer P, Sena-Esteves M, de Leon D, Doheny D, Bressman S, Fahn S, Breakefield XO, Ozelius LJ. Association of a missense change in the D2 dopamine receptor with myoclonus dystonia. *Proc.Natl.Acad.Sci.U.S.A.* 1999;96:5173-5176.
 81. Lazzarini A, Walters AS, Hickey K, Coccagna G, Lugaresi E, Ehrenberg BL, Picchiatti DL, Brin MF, Stenroos ES, Verrico T, Johnson WG. Studies of penetrance and anticipation in five autosomal-dominant restless legs syndrome

*: Publication subsequent to promotion to Professor

pedigrees. *Mov.Disord.* 1999;14:111-116.

82. †Walker RH, Spiera H, Brin MF, Olanow CW. Parkinsonism associated with Sjogren's syndrome: three new cases and a review of the literature. *Mov.Disord.* 1999;14:262-268.
83. Klein C, Friedman J, Bressman S, Vieregge P, Brin MF, Pramstaller PP, de Leon D, Hagenah J, Sieberer M, Fleet C, Kiely R, Xin W, Breakefield XO, Ozelius LJ, Sims KB. Genetic testing for early-onset torsion dystonia (DYT1): Introduction of a simple screening method, experiences from testing of a large patient cohort, and ethical aspects. *Genet.Test.* 1999;3:323-328.
84. Mezaki T, Kaji R, Brin MF, Hirota-Katayama M, Kubori T, Shimizu T, Kimura J. Combined use of type A and F botulinum toxins for blepharospasm: a double-blind controlled. *Mov Disord.* 1999;14:1017-1020.
85. †Brin MF, Lew MF, Adler CH, Comella CL, Factor SA, Jankovic J, O'Brien C, Murray JJ, Wallace JD, Willmer-Hulme A, Koller M. Safety and efficacy of NeuroBloc (botulinum toxin type B) in type A- resistant cervical dystonia. *Neurology* 1999;53:1431-1438.
86. Brashear A, Lew MF, Dykstra DD, Comella CL, Factor SA, Rodnitzky RL, Trosch R, Singer C, Brin MF, Murray JJ, Wallace JD, Willmer-Hulme A, Koller M. Safety and efficacy of NeuroBloc (botulinum toxin type B) in type A-responsive cervical dystonia. *Neurology* 1999;53:1439-1446.
87. Ozelius LJ, Page CE, Klein C, Hewett JW, Mineta M, Leung J, Shalish C, Bressman SB, de Leon D, Brin MF, Fahn S, Corey DP, Breakefield XO. The TOR1A (DYT1) gene family and its role in early onset torsion dystonia. *Genomics* 1999; 62:377-384.
88. †Shashidharan P., Kramer B.C., Walker R.H., Olanow CW, Brin MF. Immunohistochemical localization and distribution of torsinA in normal human and rat brain. *Brain Res.* 2000;853:197-206.
89. † Morrison CE, Borod JC, Brin MF, Raskin SA, Germano IM, Weisz DJ, Olanow CW. A program for neuropsychological investigation of deep brain stimulation (PNIDBS) in movement disorder patients: development, feasibility, and preliminary data *Neuropsychiatry Neuropsychol.Behav.Neurol.* 2000;13:204-219.
90. Klein C, Gurvich N, Sena-Esteves M, Fink S, Bressman S, Brin MF, Ebersole BJ, Forsgren L, Friedman J, Grimes D, Holmgren G, Kyllerman M, Lang AE, de Leon D, Leung J, Prioleau C, Raymond D, Sanner G, Saunders-Pullman R, Vieregge P, Wahlstrom J, Breakefield XO, Kramer PL, Ozelius L, Sealfon SC. Evaluation of

*: Publication subsequent to promotion to Professor

- the role of the D2 dopamine receptor in myoclonus dystonia. *Ann Neurol* 2000;47:369-373.
91. Bressman SB, Sabatti C, Raymond D, de Leon D, Klein C, Kramer PL, Brin MF, Fahn S, Breakefield X, Ozelius LJ, Risch NJ. The DYT1 phenotype and guidelines for diagnostic testing [see comments]. *Neurology* 2000;54:1746-1752.
 92. Shashidharan P, Good PF, Hsu A, Perl D, Brin MF, Olanow CW. TorsinA accumulation in Lewy Bodies in sporadic Parkinson's disease. *Brain Res.* 2000;877:379-381.
 93. * Binder WJ, Brin MF, Blitzer A, Pogoda JM. Botulinum toxin type A (BOTOX) for treatment of migraine. *Semin.Cutan.Med Surg.* 2001;20:93-100.
 94. *,† Brin MF, Lyons KE, Doucette J, Adler CH, Caviness JN, Comella CL, Dubinsky RM, Friedman JH, Manyam BV, Matsumoto JY, Pullman SL, Rajput AH, Sethi KD, Tanner C, Koller WC. A randomized, double masked, controlled trial of botulinum toxin type A in essential hand tremor. *Neurology* 2001;56:1523-1528.
 95. * Leung JC, Klein C, Friedman J, Vieregge P, Jacobs H, Doheny D, Kamm C, deLeon D, Pramstaller PP, Penney JB, Eisengart M, Jankovic J, Gasser T, Bressman SB, Corey DP, Kramer P, Brin MF, Ozelius LJ, Breakefield XO. Novel mutation in the TOR1A (DYT1) gene in atypical early onset dystonia and polymorphisms in dystonia and early onset parkinsonism. *Neurogenetics.* 2001;3:133-143.
 96. * Olanow CW, Brin MF. Surgical therapies for Parkinson's disease. A physician's perspective. *Adv.Neurol.* 2001;86:421-433.
 97. * Verheyden J, Blitzer A, Brin MF. Other noncosmetic uses of BOTOX. *Semin.Cutan.Med Surg.* 2001;20:121-126.
 98. *,† Walker RH, Brin MF, Sandu D, Gujjari P, Hof PR, Warren OC, Shashidharan P. Distribution and immunohistochemical characterization of torsinA immunoreactivity in rat brain. *Brain Res.* 2001;900:348-354.
 99. * The Deep-brain stimulation for Parkinson's disease study group. Deep-brain stimulation of the subthalamic nucleus or the pars interna of the globus pallidus in Parkinson's disease. *N Engl J Med* 2001;345:956-963.
 100. *,† Walker RH, Purohit DP, Good PF, Perl DP, Brin MF. Severe generalized dystonia due to primary putaminal degeneration: A case report and review of the literature. *Mov Disord.* 2002;17:576-584.

*: Publication subsequent to promotion to Professor

101. * Walker RH, Brin MF, Sandu D, Good PF, Shashidharan P. TorsinA immunoreactivity in brains of patients with DYT1 and non-DYT1 dystonia. *Neurology* 2002; 58:120-124.
102. * Walker RH, Morgello S, Davidoff-Feldman B, Melnick A, Walsh MJ, Shashidharan P, Brin MF. Autosomal dominant chorea-acanthocytosis with polyglutamine-containing neuronal inclusions. *Neurology* 2002;58:1031-1037.
103. * Adler CH, Factor SA, Brin M, Sethi KD. Secondary nonresponsiveness to botulinum toxin type A in patients with oromandibular dystonia. *Mov Disord.* 2002;17:158-161.
104. Goetz, C. G., Koller, W. C., Poewe, W., Rascol, O., Sampaio, C., Brin, M. F., Lees, A. J., LeWitt, P., Lozano, A., Mizuno, Y., Nutt, J., Oertel, W., Olanow, C. W., Tolosa, E., Brefel-Courbon, C., Eichhorn, T., Ferreira, J., Katzenschlager, R., Luginger, E., Pastor, P., Seppi, K., and Spieker, S., eds. Task Force commissioned by the Movement Disorder Society. *Management of Parkinson's Disease: An Evidence-Based Review.* Hoboken:Wiley, 2002.

B. Books, reviews, chapters, letters and editorials:

1. † Brin MF, Traber MG. Vitamin E deficiency and neurological disease. *Laboratory Management* 1985;23:57-67.
2. † Brin MF, Fahn S, Moskowitz CB, Friedman A, Shale HM, Green PE, Blitzer A, List T, Lange D, Lovelace RE, McMahon D. Localized injections of botulinum toxin for the treatment of focal dystonia and hemifacial spasm. *Adv Neurol* 1988;599-608.
3. † Brin MF, Moskowitz CB, Fahn S. The Dystonia Clinical Research Center Tissue Resource Facility. *Adv Neurol* 1988;50:215-222.
4. Lange DJ, Brin M, Fahn S, Lovelace RE. Distant effects of locally injected botulinum toxin: incidence and course. *Adv Neurol* 1988;50:609-614.
5. Bressman SB, de Leon D, Brin MF, Risch N, Fahn S. The pattern of inheritance of dystonia among Ashkenazi Jews. *Adv Neurol* 1988;50:45-56.
6. Kramer PL, Ozelius LO, Brin MF, Bressman SB, Moskowitz CB, Fahn S, Kidd KK, Guesella J, Breakefield XO. Molecular genetics of an autosomal dominant form of Torsion Dystonia. *Adv Neurol* 1988;50:57-66.
7. † Brin MF, de Yebenes J, Fahn S. Neuroacanthocytosis (Levine syndrome).

*: Publication subsequent to promotion to Professor

†: Brin is primary or senior author

Current Opinion in Neurol and Neurosurg 1988;1:332-334.

8. † Brin MF, Younger D. Neurologic disorders and aspiration. *Oto Clinics of North Amer* 1988;691-699.
9. Blitzer A, Brin MF. Spastic dysphonia (laryngeal dystonia). Gates G (ed). *Current therapy in otolaryngology - head and neck surgery*. 1989;4.
10. Blitzer A, Brin MF, Fahn S. Botulinum toxin injections for lingual dystonia. *Laryngoscope* 1991;101: 799.
11. † Brin MF. Interventional neurology: treatment of neurological conditions with local injections of botulinum toxin. *Arch de Neurobiol (Spain)* 1991;54 (Suppl 3):7-23.
12. † Brin MF, Fahn S, Blitzer A, Ramig LO, Stewart C. Movement Disorders of the Larynx. In Blitzer A, Brin MF, Sasaki CT, Fahn S, Harris KS (eds): Neurological disorders of the larynx. Thieme:New York, 1992: 248-276.
13. † Brin MF, Blitzer A, Stewart C, Fahn S. Treatment of spasmodic dysphonia (laryngeal dystonia) with local injections of botulinum toxin: review and technical aspects. In Blitzer A, Brin MF, Sasaki CT, Fahn S, Harris KS (eds): Neurological disorders of the larynx. Thieme:New York, 1992:214-228.
14. † Brin MF. Advances in dystonia: genetics and treatment with botulinum toxin. In Smith B, Adelman G. *Neuroscience Year, Supplement to the Encyclopedia of Neuroscience*. Birkhauser: Boston. 1992, 56-58.
15. Lang A, Quinn N, Marsden CD, Findley L, Koller W, Brin M, Fahn S. Essential tremor [letter; comment]. *Neurology* 1992;42: 1432-1434.
16. Blitzer A, Brin MF. Neurolaryngology. In: Cummings CW, Fredrickson JM, Harker LA, Krause CJ, Schuller DE (eds) *Otolaryngology - Head and Neck Surgery*. Mosby Year Book, S. Louis, 1992; 2053-2060.
17. Fahn S, Breakefield XO, and the Dystonia Genetics Research Group. Idiopathic torsion dystonia in Ashkenazi Jews: autosomal dominant inheritance pattern of a gene located on chromosome 9q32-34. In Bonne-Tamir B (ed): *New Perspectives on Genetic Markers and Disease Among Jewish People*. London: Oxford University Press, 1992.
18. † Brin MF, Blitzer A, Stewart C, Pine Z, Borg-Stein J, Miller J, Viswanath NS, Rosenfield DB. Disorders with excessive muscle contraction: Candidates for treatment with intramuscular botulinum toxin ("botox"). In: DasGupta BR (ed).

*: Publication subsequent to promotion to Professor

Botulinum and Tetanus Neurotoxins: Neurotransmission and Biomedical Aspects. Plenum: New York, 1993: 559-576.

19. † Brin MF. Acanthocytosis. In: Goetz CG, Tanner CM, Aminoff MJ (eds): Handbook of Clinical Neurology. North-Holland:Amsterdam, 1993:271-299.
20. † Brin MF. Current concepts in the management of torticollis (cervical dystonia). In Johnson RT, Griffin JW, eds. Current Therapy in Neurological Diseases, 4th ed. Mosby - YearBook, Philadelphia, 1993.
21. † Brin MF, Blitzer A. Botulinum toxin - dangerous terminology errors (letter). J Royal Soc Med 1993;86:494.
22. Lange DJ, Brin MF, Greene P, Lovelace RE, Fahn S. Distant Effects of Locally Injected Botulinum Toxin - A Double-Blind Study of Single Fiber EMG Changes - A Reply. Muscle Nerve 1993;16: 677.
23. Blitzer A, Brin MF. Botulinum Toxin in the Management of Adductor and Abductor Spasmodic Dysphonia. In: Friedman M, Tucker HM (eds) Operative Techniques in Otolaryngology-Head and Neck Surgery. W.B. Saunders, Philadelphia, pp 199-206, 1993.
24. Blitzer A, Brin MF. Evaluation and management of hyperfunctional muscular disorders of the head and neck. Adv Oto-Head Neck Surg 1993;7:1-28.
25. † Brin MF, Blitzer A, Herman S, Stewart C. Oromandibular dystonia: treatment of 96 patients with botulinum toxin A. In: Jankovic J, Hallett M, eds. Botulinum toxin treatment. Marcel Dekker, New York, 1994, pp 429-436.
26. Blitzer A, Brin MF. The evaluation and management of abductor laryngeal dysphonia. In: Jankovic J, Hallett M, eds. Botulinum toxin treatment. Marcel Dekker, New York, 1994, pp 451-460.
27. Greene PE, Brin MF, Fahn SF, Blitzer A. Botulinum toxin in dystonia. In: Marsden CD, Fahn S. Movement Disorders 3. London:Butterworth, 1994, pp 477-502.
28. † Brin MF, Jankovic J, Comella C, Blitzer A, Tsui J, Pullman SL. Treatment of dystonia using botulinum toxin. In: Kurlan, ed. Treatment of Movement Disorders. Lippincott: Phila 1995:183-247.
29. † Brin MF, Blitzer A, Herman S, Stewart C. Oro-facio-mandibular and lingual dystonia (Meige syndrome): botulinum toxin treatment. In: Moore AP, ed. Handbook of botulinum toxin treatment. Blackwell Scientific, Oxford, 1995, (in

*: Publication subsequent to promotion to Professor

press).

30. † Brin MF, Blitzer A, Stewart C. Vocal Tremor. In: Findley LJ, Koller WC (eds) Handbook of Tremor Disorders. Dekker, New York 1995:495-520.
31. † Stewart CS, Brin MF, Blitzer A. Spasmodic Dysphonia. In: Ferrand CT, Bloom RL (eds), Introduction to Organic and Neurogenic Disorders of Communication: Current Scope of Practice. Needham Heights: Allyn & Bacon, 1997:301-318.
32. † Brin MF, Vapnek JM. Treatment of vaginismus with botulinum toxin injections. Lancet. 1997;349(9047):252-3.
33. † Brin MF. Botulinum toxin: new and expanded indications. Eur.J.Neurol. 1997;4 (suppl 2):59-66.
34. † Brin M. F. (Editor). Spasticity: Etiology, Evaluation, Management, and the Role of Botulinum Toxin Type A: A training syllabus developed by the Spasticity Study Group. Muscle Nerve 1997;20 (suppl 6): S1-S231.
35. † Brin M. F. Botulinum toxin: chemistry, pharmacology, toxicity, and immunology. Muscle Nerve 1997;20 (suppl 6): S146-68.
36. † Brin M. F. and The Spasticity Study Group. Dosing, administration, and a treatment algorithm for use of botulinum toxin A for adult-onset spasticity. Muscle Nerve 1997;20 (suppl 6): S208-20.
37. Jankovic J. and M. F. Brin. Botulinum toxin: historical perspective and potential new indications. Muscle Nerve 1997;20 (suppl 6): S129-45.
38. † Brin MF. Treatment of dystonia. In: Jankovic J, Tolosa E (eds). Parkinson's Disease and Movement Disorders. New York:Williams & Wilkins; 1998, 553-578.
39. † Brin MF. Pharmacological treatment of movement disorders. In: Germano I, ed. Neurosurgical Treatment of Movement Disorders. Lebanon: Amer.Assoc.Neurol.Surgeons, 1998:83-104.
40. † Brin MF, Blitzer A, Stewart C. Laryngeal dystonia (spasmodic dysphonia): Observations of 901 patients and treatment with botulinum toxin. Adv.Neurol. 1998;78:237-252.
41. † Brin M. F. and W. C. Koller. Epidemiology and genetics of essential tremor. Movement Disorders, 1998;13 (Suppl 3), 55-63.

*: Publication subsequent to promotion to Professor

42. Deuschl G, Bain P, Brin M. Consensus statement of the Movement Disorder Society on Tremor. Ad Hoc Scientific Committee. *Mov.Disord.* 1998;13 Suppl 3:2-23.
43. Jenner PG, Brin MF. Levodopa neurotoxicity: experimental studies versus clinical relevance. *Neurology* 1998;50:S39-S43
44. Ozelius LJ, Hewett JW, Page CE, Bressman SB, Kramer PL, Shalish C, de Leon D, Brin MF, Raymond D, Jacoby D, Penney J, Risch NJ, Fahn S, Gusella JF, Breakefield XO. The gene (DYT1) for early-onset torsion dystonia encodes a novel protein related to the Clp protease/heat shock family. *Adv.Neurol.* 1998;78:93-105.
45. Ford B, Greene PE, Louis ED, Bressman SB, Goodman RR, Brin MF, Sadiq S, Fahn S. Intrathecal baclofen in the treatment of dystonia. *Adv.Neurol.* 1998;78:199-210.
46. Bressman SB, de Leon D, Raymond D, Greene PE, Brin MF, Fahn S, Ozelius LJ, Breakefield XO, Kramer PL, Risch NJ. The role of the DYT1 gene in secondary dystonia. *Adv.Neurol.* 1998;78:107-115.
47. Blitzer A, Binder WJ, Brin MF. Management of Facial Wrinkles with Botulinum Toxin Injections. In: Krespi YP, ed. *Office-Based Surgery of the Head and Neck*. New York: Lippincott-Raven, 1998:251-254.
48. †Brin MF. Advances in Dystonia: Classification, Genetics and Therapeutics, *Neuroscience Year: Supplement to the Encyclopedia of Neuroscience*, 1999.
49. † Brin MF. Botulinum toxin for motor disorders. In: Younger DS, ed. *Textbook of Motor Disorders*. Philadelphia: Lippincott Williams & Wilkins, 1999:515-522.
50. Stewart CF, Blitzer A, Brin MF. Evaluation and management of swallowing and voice disorders. In: Younger DS, ed. *Textbook of Motor Disorders*. Philadelphia: Lippincott Williams & Wilkins, 1999:477-492.
51. † Brin MF, Benabou R. Cervical dystonia (torticollis). *Current Treatment Options in Neurology* 1999;1:33-43.
52. Blitzer A, Binder WJ, Brin MF. Botulinum toxin injections for facial lines and wrinkles: Technique. In: Blitzer A, Binder WJ, Boyd BJ, Carruthers A, eds. *Management of Facial Lines and Wrinkles*. New York: Lippincott Williams & Wilkins, 2000:303-313.

*: Publication subsequent to promotion to Professor

53. † Brin MF. Botulinum toxin therapy: Basic science and overview of other therapeutic applications. In: Blitzer A, Binder WJ, Boyd JB, Carruthers A, eds. *Management of Facial Lines and Wrinkles*. New York: Lippincott Williams & Wilkins, 2000:279-302.
54. Olanow C. W. and M. F. Brin. The role of deep brain stimulation as a surgical treatment for Parkinson's disease. *Neurology*, 2000 (in press).
55. † Brin MF. Physician and Patients in managing Parkinson's disease. In: Cote L, Sprinzeles LL, Elliott R, Kutscher AH, eds. *Parkinson's Disease and Quality of Life*. Binghamton: Haworth Press, 2000:11-13.
56. Bain P, Brin M, Deuschl G, Elble R, Jankovic J, Findley L, Koller WC, Pahwa R. Criteria for the diagnosis of essential tremor. *Neurology* 2000;54:S7
57. Koller WC, Hristova A, Brin M. Pharmacologic treatment of essential tremor. *Neurology* 2000;54:S30-S38
58. Comella,C.L., Brin,M.F., Brownlee, H.J. *Diagnosis and Treatment of Parkinson's Disease: A Handbook for Primary Care Physicians*. Chicago: Rush Presbyterian Medical Center, 2000
59. Abbasi, S., Velickovic, M., and Brin, M. F. Myoclonus. (7), 171-179. 2001. New York, Lippincott Williams & Wilkins. *The Neurologist* (Monograph Journal).
60. Brin MF, Germano I, Danisi F, Weisz D, Olanow CW. Deep brain stimulation in the treatment of dystonia. In: Krauss JK, Jankovic J, Grossman RG, eds. *Surgery for Movement Disorders*. Philadelphia: Lippincott Williams and Wilkins, 2001:307-315.
61. Brin, M. F., Hallett, M., and Jankovic, J., eds. *Scientific and Therapeutic Aspects of Botulinum Toxin*. New York:Lippencott Williams & Wilkins, 2002.
62. Brin MF, Binder WJ, Blitzer A, Schenrock L, Pogoda JM. Botulinum toxin type A for pain and headache. In: Brin MF, Hallett M, Jankovic J, eds. *Scientific and Therapeutic Aspects of Botulinum Toxin*. New York: Lippencott Williams & Wilkins, 2002.
63. Hallett M. Effects of botulinum toxin at the neuromuscular junction. In: Brin MF, Hallett M, Jankovic J, eds. *Scientific and Therapeutic Aspects of Botulinum Toxin*. New York: Lippencott Williams & Wilkins, 2002:
64. Walker RH, Morgello S, Davidoff-Feldman B, Melnick A, Walsh MJ, Shashidharan P, Brin MF. Autosomal dominant chorea-acanthocytosis: Report of

*: Publication subsequent to promotion to Professor

a family and neuropathology. In: Danek A, ed. Neuroacanthocytosis syndromes: New Perspectives for the Study of Basal Ganglia Degeneration. Springer-Verlag, 2002:

C. Media Resource and Educational Material: Videotape and CD ROM Productions

1. Jankovic, J., Brin, M. F., Comella, C. L., and Blazer, J. Botulinum Toxin Treatment of Cervical Dystonia (Videotape). 1994. New York, Churchill Livingstone.
2. †Dr. Brin is President of WE MOVE (www.wemove.org), and is contributor/editor for the entire website. This includes the content and slide series (downloadable) on dystonia, Parkinson's disease, tics/Tourettes, myoclonus, tremor and spasticity.
3. † Brin, M. F., O'Brien, C. F., Gormley, M. E., McGuire, J., and Blazer, J. The Role of Chemodenervation in Spasticity Management (Videotape). Cast: Brin, M. F., Albany, K., Gormley, M. E., Gracies, J. M., McGuire, J., Murr, S., O'Brien, C. F., and Seeberger, L. 2000. New York, WE MOVE.
4. † Esquenazi, A. and Mayer, N. New Advances in the Management of Spasticity and Muscle Overactivity (CD Rom). Contributors: Bloom, K. K., Brin, M. F., Chambers, H. G., Esquenzai, A., Gollomp, S. M., Gormley, M. E., Gracies, J. M., Ivanhoe, C. B., Keenan, M. A. E., Laborde, A., Leach, J., Mancuso, G. E., Mayer, N., and McGuire, J. R. 2000. Knoxville, Professional Postgraduate Services.

D. Abstracts:

1. † Brin MF, Nelson JS, Robert WC, et. al. Neuropathology of abetalipoproteinemia: a possible complication of the tocopherol (vitamin E) deficient state. Neurology 1983; 33 (Suppl 2): 142-143.
2. † Brin MF, Emerson RG, Pedley TA, Lovelace RE, Gouras P, MacKay C, Behrens MM, Kayden HJ, Levy J, Baker H. The vitamin E deficiency syndrome: occurrence, clinical characteristics, and electrophysiological features. Ann Neuro 1983;14:109.
3. Sung K-LP, Yang J, Brin MF, Chien S. Red cell rheology in chorea acanthocytosis. Microvasc Res 1985;29:253.
4. Kavey N, Gidro-Frank S, Brin MF, Fahn S. Disorderd sleep in a retired professional boxer. In Chase MH, McGinty DJ, Wilder-Jones R eds. Sleep Research. Brain Information Services/Brain Research Institute, UCLA 1985;14:240.

*: Publication subsequent to promotion to Professor

†: Brin is primary or senior author

5. † Brin MF, Bressman SB, Fahn S, Resor SR, Weitz J, Sagman DL. Chorea-acanthocytosis: clinical and laboratory features in 5 cases. *Neurology* 1985;35 (suppl 1):110.
6. Fahn S, List T, Moskowitz C, Brin MF, Bressman S, Burke R, Scott A. Double-blind controlled study of botulinum toxin for blepharospasm. *Neurology* 1985;35 (suppl 1):271.
7. Burke RE, Fahn S, Brin MF, Bressman SB, Moskowitz C. The clinical course of autosomal dominant torsion dystonia. *Neurology* 1985;35 (suppl 1):273.
8. † Brin MF, Gregg RE, Pedley TA, Lovelace RE, Wichman A, Behrens MM, Gouras P, MacKay C, Kayden HJ, Baker H, Levy J. Vitamin E deficiency and neurologic disease: clinical and electrophysiologic evaluation in 24 patients. *J Neurol* 1985;232 (suppl) 180.
9. † Fahn S, Brin MF. Delayed-onset dystonia in adults following vascular insult. *J Neurol* 1985;232 (suppl) 220.
10. Rutledge JN, Hilal SK, Silver J, Brin MF, Cote LJ. Magnetic Resonance Imaging of Movement Disorders. *Radiology* 1985;157:370.
11. † Brin MF, Fahn S, Moskowitz CB, Blitzner A, Friedman A, Shale HM, Greene PE, List T, Lovelace RE. Injections of botulinum toxin for the treatment of focal dystonia. *Neurology* 1986;36(suppl 1),120.
12. † Brin MF, Fahn S, Bressman SB, Burke RE. Dystonia precipitated by peripheral trauma. *Neurology* 1986;36(suppl 1),119.
13. Kaplan JG, Pack DR, Horoupian DS, Brin MF, Schaumburg HH. Gluten enteropathy causes distal axonopathy with normal vitamin E levels. *Neurology* 1986;36(suppl 1), 176.
14. de Leon D, Bressman SB, Brin MF, Fahn S, Risch N. Inheritance of idiopathic torsion dystonia in the Ashkenazim. *Am J Human Genetics* 1986;39 (suppl 2):A58.
15. † Brin MF, Ozelius L, de Leon D, Seeley R, Amos J, Warburton D, Fahn S, Bressman SB, Wasmuth J, Kramer P, Kidd K, Gusella J, Breakefield XO. Dystonia symptoms in a female with 45,XX,-18,-21,+der t(18;21)(18q21q)mat and exclusion of regions of chromosome 18 in another family with autosomal dominant dystonia. *Am J Human Genetics* 1986;39 (suppl 2):A190.

*: Publication subsequent to promotion to Professor

16. Greene P, Shale H, Fahn S, Brin MF, Friedman A. Treatment of torticollis with injections of botulinum toxin. *Neurology* 1987;37:123.
17. † Brin MF, Bressman SB, Moskowitz CB, Fahn S, Burke RE, de Leon D. Autosomal dominant dystonia in a large North American family: Clinical features. *Neurology* 1987;37:137.
18. Bressman SB, de Leon D, Brin MF, Risch N, Shale H, Burke RE, Greene PE, Fahn S. Inheritance of primary torsion dystonia among Ashkenazi Jews. *Neurology* 1987;37:187.
19. Phillips PC, Brin MF, Fahn S, Greene PE, Sidtis JJ, Ragassa J, Krol G, Moeller JR, Sergi ML, Rottenberg DA. Abnormal regional cerebral glucose metabolism in chorea-acanthocytosis: an ¹⁸F-fluorodeoxyglucose positron emission tomographic study. *Neurology* 1987;37:211.
20. Truong DD, Bressman S, Shale H, Brin MF, Greene P, Fahn S. Clonazepam, haloperidol and clonidine in tic disorders. *Neurology* 1987;37:279.
21. de Leon D, Brin MF, Bressman SB, Burke RE, Fahn S. Support group for young adults with idiopathic torsion dystonia. *Am J Human Genetics* 1987;41(suppl3):
22. Bressman SB, de Leon D, Brin MF, Risch N, Shale H, Burke RE, Greene PE, Fahn S. Clinical spectrum of dystonia in Ashkenazi Jewish families. *Neurology* 1988 (suppl 1), 124.
23. † Brin MF, Blitzer A, Fahn S, Lovelace RE. Laryngeal dystonia (LD) at the Dystonia Clinical Research Center (DCRC): clinical and electromyographic features in 110 cases. *Neurology* 1988 (suppl 1), 129.
24. † Brin MF, Blitzer A, Fahn S, Lovelace RE. Adductor laryngeal dystonia: treatment with local injections of botulinum toxin (BOTOX). *Neurology* 1988 (suppl 1), 244.
25. Kang JU, Greene P, Fahn S, Brin MF, Moskowitz C, Burke RE, Flaster E. Double-blind placebo-controlled study of botulinum toxin injections for torticollis. *Neurology* 1988(suppl 1), 244.
26. Blitzer A, Brin MF, Fahn S. Botulinum toxin therapy for recurrent laryngeal nerve section failure for adductor laryngeal dystonia. *American Laryngological Association*, 1989.
27. † Brin MF, Blitzer A, Greene PE, Fahn S. Botulinum toxin for the treatment of oromandibulolingual (OMD) dystonia. *Neurology* 1989 (suppl 1), 294.

*: Publication subsequent to promotion to Professor

28. Burke RE, Brin MF, de Leon D, Bressman SB, Fahn S. Comparison of the clinical course of the Jewish and non-Jewish, juvenile-onset, familial torsion dystonias. *Neurology* 1989 (suppl 1), 188.
29. † Brin MF, Blitzer A, Stewart C, Fahn S. Local injections of botulinum toxin for adductor laryngeal dystonia: dose effects. *Movement Disorders Symposium*, 10/89.
30. Breakefield XO, Ozelius L, Kramer PL, Moskowitz CB, Kwaitkowski DJ, Brin MF, Bressman SB, de Leon D, Hsu Y-PP, Craft C, Hu G, Haines J, Burke RE, Nygaard T, Raese J, Gusella JF, Fahn S. Human dystonia gene found on chromosome 9q32-q34. *Neuroscience abstracts*, 1989.
31. † Brin MF, Moskowitz CB, Bressman SB, Burke RE, de Leon D, Risch N, Fahn S. Autosomal dominant dystonia in a large North American Family: clinical features. *Am J Hum Genet (Suppl)* 1989;45:A41.
32. Ozelius L, Kramer PL, Moskowitz CB, Kwaitkowski DJ, Brin MF, Bressman SB, Schuback DE, de Leon D, Hsu Y -PP, Craft C, Hu G, Haines J, Burke RE, Raese J, Gusella JF, Fahn S, Breakefield XO. Human dystonia gene found on chromosome 9q32-q34. *Am J Hum Genet (Suppl)* 1989;45:A211.
33. Kramer PL, Ozelius L, Risch N, de Leon D, Bressman S, Brin M, Schuback D, Gusella J, Breakefield XO, Fahn S. Gene for dystonia in Ashkenazi Jewish population located on chromosome 9q. *Am J Hum Genet (Suppl)* 1989;45:A147.
34. Risch N, Bressman SB, de Leon D, Brin MF, Burke RE, Greene PE, Shale H, Claus EB, Cupples LA, Fahn S. Autosomal dominant inheritance of idiopathic torsion dystonia in Ashkenazi Jews. *Am J Hum Genet (Suppl)* 1989;45:A60.
35. de Leon D, Bressman S, Brin M, Burke R, Fahn S. Genetic counseling for dystonia. *Am J Hum Genet (Suppl)* 1989;45:A120.
36. † Gordon MF, Brin MF, Giladi N, Hunt A, Fahn S. Dystonia precipitated by peripheral trauma. *Movement Disorders (suppl 1)*, 1990;5:67.
37. † Brin MF, Blitzer AB, Stewart C, Fahn S. Botulinum toxin: Now for abductor laryngeal dystonia. *Neurology* 1990;40 (suppl 1), 381.
38. de Leon D, Brin MF, Blitzer A, Heiman G, Fahn S. Genetic factors in spastic dysphonia. *AAN* 1990. *Neurology* 1990;40 (suppl 1), 142.
39. Bressman SB, de Leon D, Brin MF, Moskowitz CB, Kramer PL, Risch N, Ozelius

*: Publication subsequent to promotion to Professor

†: Brin is primary or senior author

- L, Schuback D, Kwaitkowski DJ, Haines J, Gusella JF, Breakefield XO. Dystonia gene located on chromosome 9q. *Neurology* 1990;40 (suppl 1), 144.
40. Blitzer AB, Brin MF. Botulinum toxin therapy for the treatment of laryngeal dystonia. *Am Laryngol Assn*, 1990
 41. Tryon WW, Brin MF, Fahn S, Guillory S, Winfield L, Bressman S. Validating accelerometric measures of parkinsonism: technical aspects and preliminary results. Fourth annual PSG/MDS symp; *Ann Neurol* 1990;28:297.
 42. Blitzer AB, Brin MF. Abductor laryngeal dystonia: a series treated with botulinum toxin. *Am Laryngol, Rhinol, Otol Soc (Triological Soc)*, May, 1991.
 43. † Brin MF, Blitzer A, Braun N, Stewart C, Fahn S. Respiratory & obstructive laryngeal dystonia: treatment with botulinum toxin (Botox). *Neurology* 1991;41 (Suppl 1), 291.
 44. de Leon D, Brin MF, Murphy P, Bressman SB, Ozelius L, Cardon N, Reich S, Breakefield XO and Fahn S. Genetic counseling for idiopathic torsion dystonia: First use of DNA-based carrier detection in Ashkenazi Jews. *Movement Disord* 1991;6:273-274.
 45. † de Leon D, Brin MF, Markova E, Freidman A, Ivanova-Smolenska I, Bressman SB, Burke RE, Vereschagin N and Fahn S. Dopa-responsive dystonia in the USSR: The Soviet-American Neurogenetics Collaborations (SANG). Presented at the 10th International Symposium on Parkinson's Disease, Tokyo, October 1991.
 46. Risch N, de Leon D, Ozelius L, Kramer P, Bressman S, Kwiatkowski D, Brin M, Schuback D, Burke RE, Gusella J, Fahn S, Breakefield XO. The genetics of torsion dystonia in Ashkenazi Jews. Presented at the UK-Israel Binational Symposium on Molecular Genetics and Neuropsychiatric Disorders. 10/28-10/29, 1991; Herzliya, Israel.
 47. † Borg-Stein J, Pine ZM, Miller J, Brin MF. Botulinum toxin for treatment of spasticity in multiple sclerosis. Association of Academic Physiatrist, Orlando Florida, February 12-15, 1992.
 48. † Brin MF, Stewart C, Viswanath NS, Beardsley A, Blitzer A, Rosenfield D. Pilot study: laryngeal botulinum toxin (botox) injections for disabling stuttering in adults. *Neurology* 1992; 42 (Suppl 3):376.
 49. † Futrovsky LE, Kochanowicz N, Stewart C, Blitzer A, Brin MF. Botulinum toxin for spasmodic dysphonia: Measures of quality of life improvement.

*: Publication subsequent to promotion to Professor

- Neurology 1992; 42 (Suppl 3):240.
50. † Baer JW, Braun N, Brin MF, Stewart C, Austin J, Blitzler A. Disordered diaphragmatic motion in patients with cranial dystonia: A fluoroscopic study. Neurology 1992; 42 (Suppl 3):240.
 51. † Gordon, MF, Franklin M, de Leon D, Warburton D, Seely R, Phillips P, Asaikar S, Maccabee P, Lazar R, Sinha K, Yeboa K, Pearl M, Fahn S, Brin MF. Dystonia in two patients with deletion of 18p. Neurology 1992; 42 (Suppl 3):239.
 52. Bressman SB, de Leon D, Ozelius L, Kramer P, Gusella JF, Brin MF, Burke RE, Fahn S, Breakefield XO, Risch N. Linkage disequilibrium of idiopathic torsion dystonia (ITD) in Ashkenazim: a single mutation or its phenotype. Neurology 1992; 42 (Suppl 3):393.
 53. † Braun N, Abd A, Baer J, Brin M. Dyspnea in dystonia: a functional evaluation. American Thoracic Society/American Lung Association, May, 1992.
 54. † Brin MF, Blitzler A, Stewart C, Viswanath N, Beardsley A, Rosenfield D, Fahn S. Laryngeal botulinum toxin (botox) injections in 431 patients with laryngeal movement disorders: spasmodic dysphonia, adult stuttering and essential voice tremor. Second International Movement Disorders Conference, 1992.
 55. † Gordon MF, Brin MF, de Leon D, Warburton D, Yeboa K, Bressman S, Fahn S. Dystonia in a patient with deletion of 18q. Second International Movement Disorders Conference, 1992.
 56. Nelson JS, Brin MF. Neuropathology of abetalipoproteinemia (ABL): relation to avitaminosis E and age. XIX International Congress of the International Academy of Pathology, Madrid, Spain, October 18-24, 1992.
 57. † Stewart C, Winfield L, Hunt A, Ciecierski K, Bressman S, Fahn S, Brin MF. Speech Dysfunction in early Parkinson's disease. Movement Disorders 1992;7:294.
 58. de Leon D, Bressman S, Brin MF, Risch N, Fahn S. Torsion dystonia in Ashkenazi Jews: Is there evidence for an imprinted gene? Movement Disorders 1992;7:296.
 59. Blitzler A, Brin MF. Surgical management of laryngeal disorders in Parkinson's disease. Eastern Section of the Am Laryngol, Rhinol, Otol Soc (Triological Soc), Jan, 1993.
 60. Bressman SB, Heiman G, Hunt A, Ozelius L, Nygaard T, Brin MF, Moskowitz

*: Publication subsequent to promotion to Professor

- CB, de Leon D, Burke RE, Fahn S, Risch N, Breakefield XO, Kramer P. Evidence for genetic heterogeneity in idiopathic torsion dystonia (ITD). *Neurology* 1993;43 (Suppl 2): 330.(Abstract)
61. † Brin MF, Hays A, Symmans WA, Donaldson AM, Marsh WL. Neuropathology of McLeod phenotype is like chorea-acanthocytosis (CA). *Can J Neurol Sci* 1993;20 (Suppl 4): 234.(Abstract)
 62. † Brin MF, Ozelius L, Risch N, Ivanova-Smolenskaia IA, Markova ED, Limborska SA, Kramer P, de Leon D, Bressman S, Hewett J, Fahn S, Breakefield XO. Analysis of the dystonia gene (DYT1) in Russia.
 63. † Lovelace RE, Blitzer A, Brin MF. Quantitation of the effect of botox on laryngeal spasmodic dysphonia with the turns analysis method. *Can J Neurol Sci* 1993;20: 365 (Abstract).
 64. † Brin MF, Hays A, Kaplan JG, Bello L. Huntington's phenotype with mitochondrial encephalomyopathy. *Ann Neurol* 1993;34: (Abstract).
 65. † Brin MF, Friedman A, Greene P, Blitzer A, Shale H, Pullman S, Bressman SB, Burke RE, Fahn S. Botulinum toxin type A (BTX-A) for dystonia: A decade of experience with 1913 patients. *Focus on Dystonia*, March 25, 1994, Rome Italy.
 66. † Brin MF, Sadiq S, Goodman R, Ford B, Perez E, Fahn S. Intrathecal baclofen (IT-B) for dystonia. *Neurology* 1994;44 (Suppl 1):A338 (Abstract).
 67. † Brin MF, de Leon D, Busenbark K, Pahwa R, Marjama J, Petzinger G, Bentivoglio A, Lynch T, Winfield L, Rasnick H, Boinoff J, Bressman SB, Diamond B, Giladi N, Ford B, Fahn S, Koller W. Essential Tremor: Clinical Characteristics of 5 Large North American Kindreds. *Movement Disorders* 1994 (Abst).
 68. † Brin MF. Botulinum toxin: Perspective on clinical use. *Movement Disorders* 1995;10:362.
 69. † Brin MF, Blitzer A, Stewart C, Diamond B, Lovelace RE. Botulinum toxin for spasmodic dysphonia (laryngeal dystonia): double blind placebo controlled assessment of dose and technique. *Movement Disorders* 1995;10:369.
 70. Winfield L, Bressman S, Brin M, Kao R, Fahn S. The psychosocial impact of progression of Parkinson's disease (PD). *Movement Disorders* 1996; 11 (Suppl 1):159.
 71. Petzinger GM, Stewart C, Kandji AG, Brin M, Greene P, Bressman S, Fahn S.

*: Publication subsequent to promotion to Professor

- Thalamotomies and speech impairment in idiopathic torsion dystonia (ITD). *Movement Disorders* 1996; 11 (Suppl 1):229.
72. Olanow CW, Germano I, Brin MF, Swope D, Weisz D. Deep brain stimulation of the subthalamic nucleus for Parkinson's disease. *Mov.Disord.* 1996;11:598-599.
 73. Eidelberg D., J. R. Moeller, A. Antonini, K. Kazumata, M. F. Brin, S. B. Bressman, and S. Fahn. Abnormal metabolic brain networks in DYT-1 dystonia. *Neurology* 1997: A62.
 74. † Swope D. M., M. F. Brin, I. Germano, and C. W. Olanow. Acute stimulation failure in an advanced Parkinson's disease (PD) patient treated with deep brain stimulation (DBS). *Neurology* 1997: A431.
 75. † Walker R. H., A. Melnick, M. Walsh, R. Davidoff-Feldman, and M. F. Brin. Dominantly inherited chorea-parkinsonism-dementia-acanthocytosis with red cell protein membrane abnormalities. *Annals of Neurology* 1997: 407.
 76. † Walker R. H., H. Spiera, and M. F. Brin. Parkinsonism associated with Sjogren's syndrome. *Annals of Neurology* 1997: 411.
 77. † Binder W, Brin MF, Blitzer A, Schenrock L, Diamond B. Botulinum toxin type A (BTX-A) for migraine: an open label assessment. *Mov.Disord.* 1998;13:241(Abstract)
 78. † Brin MF, Germano I, Danisi FO, Weisz D, Gracies JM, Eidelberg D, Bucobo JC, Olanow CW. Deep brain stimulation (DBS) of pallidum in intractable dystonia. *Mov.Disord.* 1998;13:274.
 79. Germano IM, Villalobos H, Weisz D, Brin MF, Olanow CW. Image-guided computer-assisted technology as adjuvant for placement of deep brain stimulators. *Mov.Disord.* 1998;13:264.
 80. Gracies JM, Bucobo JC, Danisi FO, Germano I, Brin MF, Olanow C. Proposal for a method of stimulation parameter adjustment after deep brain stimulation for Parkinson's disease (PD). *Mov.Disord.* 1998;13:50.
 81. Morrison CE, Borod JC, Raskin SA, Brin MF, Germano IM, Weisz D, Olanow CW. Cognitive effects of brain surgery and stimulation in Parkinson's disease. *Clinical Neuropsychologist* 1998;12:256.
 82. †Morrison CE, Borod JC, Danisi FO, Germano IM, Weisz D, Olanow CW, Brin MF. Cognition and deep brain stimulation in two dystonia patients. *Mov.Disord.* 1998;13:25.

*: Publication subsequent to promotion to Professor

83. † Walker RH, Danisi FO, Germano I, Goodman RR, Brin MF. Equipment-related complications of intrathecal baclofen therapy. *Mov.Disord.* 1998;13:69.
84. † Walker RH, Danisi FO, Brin MF. Mexiletine and hyperkinetic movement disorders. *Neurology* 1998;50:A357.
85. Page CE, Klein C, Ozelius LJ, Gordon MF, LeWitt PA, Brin MF. Genetic analysis of three patients with dystonia and deletion in chromosome 18p. *Neurology* 1998;50:A427-A427.
86. Brashear, A., Lew, M., Dykstra, D. D., Comella, C., Factor, S. A., Rodnitzky, R., Trosch, R., Singer, C., Brin, M. F., Murray, J. J., Wilmer-Hulme, A., Wallace, J. D., and Koller, M. Safety and efficacy of Neurobloc (botulinum toxin type-B) in type-A responsive cervical dystonia patients. *Neurology* 1999; 52 (Suppl. 2), A292-A293.
87. †Brin, M. F., Lew, M. F., Adler, C. H., Comella, C., Factor, S. A., Jankovic, J., O'Brien, C. F., Murray, J. J., Wallace, J. D., Wilmer-Hulme, A., and Koller, M. Safety and efficacy of Neurobloc (botulinum toxin type-B) in type-A resistant cervical dystonia (CD) patients. *Neurology* 1999;52 (Suppl. 2), A293.
88. Purohit, D. P., Walker, R., Brin, M., and Perl, D. P. Clinicopathologic study of a case of dystonia with putaminal degeneration of unknown etiology. *J Neuropath Exper Neurol* 1999;58:555.
89. † Walker, R. H., Swope, D., Danisi, F. O., Germano, I. M., Goodman, R. R., and Brin, M. F. Intrathecal baclofen therapy for dystonia. *Neurology* 1999;52 Suppl. 2, A521.
90. † Shashidharan, P., Kramer, B., Good, P. F., Walker, R. H., Hsu, A., Perl, D. P., Olanow, C. W., and Brin, M. F. Immunoreactivity of torsin-A in normal human brain and in Lewy bodies of Parkinson's disease brain. *Soc.Neurosci.Abst.* 25, 2115. 1999.
91. † Benabou R, Brin MF, Doucette JT. Botox(R) lots 79-11 and 2024: A retrospective analysis in the clinical management of cervical dystonia (CD). *Mov.Disord.* 1999;15 (Suppl 2):28.
92. † Brin MF. Clinical trials for cervical dystonia (CD): Introductory comments. *Mov.Disord.* 1999;15 (Suppl 2):6.
93. † Brin MF, Comella C, O'Brien C, Jankovic J, Benabou R, Jaglin J, Johnston T, Judd D, Hunter C. An interim analysis of the clinical status of patients receiving

*: Publication subsequent to promotion to Professor

Current Botox (R) (lot 2024 or subsequent lots) for the treatment of cervical dystonia (CD). *Mov.Disord.* 1999;15 (Suppl 2):28-29.

94. † Brin MF, Binder WJ, Blitzler A, Schoenrock LD, Pogoda JM. Botulinum toxin for headache: data and a review. *Mov.Disord.* 1999;15 (Suppl 2):12.
95. Factor S, Adler CH, Brashear A, Brin MF, Comella CL, Dykstra DD, Jankovic J, Lew MF, O'Brien C, Rodnitzky RL. Safety and efficacy of Neurobloc(TM) (botulinum toxin type B) in type-A responsive and type-A resistant patients with cervical dystonia. *Mov.Disord.* 1999;15 (Suppl 2):7.
96. Adler CH, Brin MF, Factor SA, Sethi KD, Newman S. Secondary non-responsiveness to botulinum toxin type A in patients with oromandibular dysonia. *J.Neurology* 2000;247 (Suppl 3):81-81.
97. Bressman SB, Raymond D, de Leon D, Fahn S, Burke RE, Brin MF, Saunders-Pullman RJ, Wendt KJ, Kramer PL, Breakefield XO, Ozelius LJ, Risch NJ. Validity of definite, probable, and possible dystonia as diagnostic categories. *Neurology* 2000;54 (Suppl 3):A118(Abstract).
98. † Doheny D, Brin MF, Smith C, Morrison C, Walker R, Abassi S, Klein C, Ozelius L, de Leon D, Silverman J. Phenotypic features of myoclonic dystonia in two kindreds. *Mov.Disord.* 2000;15 (Suppl 3):162.
99. Gracies JM, Danisi FO, Brin MF, Olanow CW. Transient muscle twitch and paresthesiae as surrogate markers for tremor reduction in determining optimal electrode configuration following deep brain stimulation. *Mov.Disord.* 2000..
100. Gracies JM, Danisi FO, Brin MF, Olanow CW. Deep brain stimulation of the subthalamic nucleus for tremulous Parkinson's disease: potential role of direct cortispinal activation. *Mov.Disord.* 2000..
101. Klein C, Kramer PL, Friedman J, Kurlan R, Saunders-Pullman R, Leung J, Garrells J, Schilling K, Raymond D, de Leon D, Schwinger E, Vieregge P, Bressman S, Brin MF, Ozelius L. Myoclonus-dystonia is linked to chromosome 7q in five out of six families. *Neurology* 2000;54 (Suppl 3):A264-A265.
102. † Morrison C, Smith C, Doheny D, de Leon D, Walker R, Abassi S, Klein C, Ozelius L, Borod J, Silverman J, Brin MF. Neurocognitive features of myoclonic dystonia. *Neurology* 2000;54 (Suppl 3):A310.
103. † Shashidharan P, Brin MF, Gujjari P, Walker RH, Olanow CW. PC12 cells expressing human recombinant torsinA reveal properties of a heat shock protein. *Soc Neuroscience* 2000..

*: Publication subsequent to promotion to Professor

104. † Walker RH, Brin MF, Sandu D, Gujjari P, Mytilineou C, Hof PR, Ledoux MS, Evinger C, Olanow CW, Shashidharan P. Immunohistochemical studies of torsinA in animal models of dystonia. *Mov.Disord.* 2000;15 (Suppl 3):138.
105. † Walker RH, Muralidharan N, Gujjari P, Hof P, Olanow CW, Brin MF, Shashidharan P. Distribution and immunohistochemical characterization of torsinA-immunoreactive neurons in rat and macaque brain. *Neurology* 2000;54 (suppl 3):A54.
106. † Walker RH, Reichler B, Germano IM, Brin MF. Spasticity in Friedreich's ataxia treated with intrathecal baclofen. *Mov.Disord.* 2000;15 (Suppl 3):420-421.
107. † Abbasi S, Danisi FO, Brin M. Dopamine agonist pramipexole (Mirapex) in dystonia. *Mov.Disord.* 2000;15 (Suppl 3):161.
108. † Abbasi S, Danisi FO, Blitzler A, Sulica A, Brin M. Palatal Myoclonus(PM). Phenotype of 15 patients. *Mov.Disord.* 2000;15 (Suppl 3):106.
109. Beric A, Sterio D, Moggilner A, Zonenshayn M, Brin MF, Olanow C, Gracies JM. Changes in the STN neuronal activity after GPi stimulation in PD patient. *Mov.Disord.* 2000;15 (Suppl 3):72.
110. † Brin M, Doheny D, Castellani R, de Leon D. Neuropathology of myoclonic dystonia with the dopamine D2 Receptor (DRD2) mutation. *Mov.Disord.* 2000;15 (Suppl 3):163.
111. † Brin MF. Medical and surgical treatment of dystonia. *Mov.Disord.* 2000;15 (Suppl 15):11.
112. † Danisi F, Abbasi S, Brin M. A case of atypical Huntington's disease: early onset, prolonged survival, negative family history. *Mov.Disord.* 2000;15 (Suppl 3):244(Abstract)
113. *,† Brin MF, Blitzler A, Stewart CF, Diamond B, Pogoda JM. Botulinum toxin type A for adductor spasmodic dysphonia (laryngeal dystonia): double-blind placebo-controlled assessment of dose and technique. *Neurology* 2001;56 (Suppl 3):A346(Abstract)
114. *,† Doheny D, Brin MF, Morrison C, Smith C, Danisi F, Velickovic M, Leung J, Breakefield XO, Klein C, Ozelius L, Silverman J. Myoclonus dystonia: study of a family with a novel DYT1 mutation. *Neurology* 2001;56 (Suppl 3):A122(Abstract)

*: Publication subsequent to promotion to Professor

115. * Velickovic M, Brin MF, Schilsky ML. Wilson's disease and speech impairment. *Neurology* 2001;56 (Suppl 3):A119-A120(Abstract)
116. *,† Walker RH, Sandu D, Good PF, Morgello S, Brin MF, Shashidharan P. TorsinA immunoreactivity in patients with movement disorders. *Neurology* 2001;56 (Suppl 3):A441(Abstract)

E. Parkinson Study Group: Reviews, chapters, letters & editorials:

1. Shoulson I, Fahn S, Langston JW: Conference report of first symposium on etiology, pathogenesis and prevention of Parkinson's disease. *Archives of Neurology* 1988; 45:807-811.
2. Shoulson I: Experimental therapeutics directed at the pathogenesis of Parkinson's disease, in *Handbook of Experimental Pharmacology: Drugs for the Treatment of Parkinson's Disease*, DB Calne (ed), Springer-Verlag, Berlin, 1989 pp. 289-305.
3. Shoulson I and the Parkinson Study Group. Deprenyl and tocopherol antioxidative therapy of parkinsonism (DATATOP). *Acta Neurol. Scandinavica* (Supplement 126) 1989; 80:171-175.
4. Shoulson I: Protective therapy for Parkinson's disease, in *Therapy of Parkinson's Disease*, WC Koller and G Paulson (eds), Marcel Dekker, NY, 1990, pp. 357-358.
5. Shoulson, I, Fahn S, Oakes D, Lang A, Langston JW, LeWitt P, Olanow W, Penney, JB, Tanner C: Deprenyl for the treatment of early Parkinson's disease (letter). *New England Journal of Medicine* 1990; 322:1527-1528.
6. Parkinson Study Group. DATATOP and clinical neuromyology IX. *Neurology* 1991; 41:771-773.
7. Shoulson I and the Parkinson Study Group. Effect of selegiline (L-deprenyl) on the progression of disability in early Parkinson's disease: a preliminary report, in *Neuroprotective Therapy In Early Parkinson's Disease*, UK Rinne, E Heinonen (eds.) Orion Corp, Farnos, Turku, Finland, 1991, pp. 25-32.
8. LeWitt P, and the Parkinson Study Group. Deprenyl's effect at slowing progression of parkinsonian disability: The DATATOP Study. *Acta Neurol Scand* 1991; 84: Suppl 136: 70-86.
9. Shoulson I. Estrategias terapeuticas en la enfermedad de Parkinson. *Arch de Neurobiol* 1991; 54, 6:277-281.

*: Publication subsequent to promotion to Professor

†: Brin is primary or senior author

10. Shoulson I, and the Parkinson Study Group. An interim report of the effect of selegiline (l-deprenyl) on the progression of disability in early Parkinson's disease. *Eur Neurol* 1992; 32 (Suppl 1):46-53.
11. Shults CW, and the Parkinson Study Group. Effect of selegiline (deprenyl) on the progression of disability in early Parkinson's disease. *Acta Neurol Scand Supplement* 1993; 87:36-42.

F. Parkinson Study Group: Abstracts:

1. Shoulson I and the Parkinson Study Group - Fahn S, Brin M, Burke R, Bressman S, Tetrad J, Langston JW, Jankovic J, Kurlan R, Plumb S, Odoroff C, Tanner C, Goetz C, Klawans H, Shannon K, Lang A, Weiner W, Sanchez-Ramos J, Penney J, Young A, Starosta-Rubinstein S, Hurtig H, Stern M, Gollomp S, Pfeiffer R, Friedman J, Olanow W, Paulson G, Tsui J, Nutt J, Rodnitzky R, Grimes D, Hassan M, LeWitt P, Hoehn M, Bennett J: Correlates of clinical decline in early Parkinson's disease. *Neurology* (abstract) 1987; 37 (Suppl 1):278.
2. Shoulson I and the Parkinson Study Group. Antioxidative experimental strategies for Parkinson's disease (abstract). 9th International Symposium on Parkinson's Disease, Jerusalem, Israel, June 5-9, 1988, p. 19.
3. Shoulson I and the Parkinson Study Group. Antioxidative experimental strategies aimed at slowing the progression of Parkinson's disease (abstract). Proceedings of the International Symposium on Alzheimer's Disease, June 12-15, 1988, Kuopio, Finland (World Federation of Neurology Research Group on Dementia) Publications of the University of Kuopio (ISBN 951-780-488-1), 1988; pp. 35-36.
4. Kurlan R, Clark S, Penney J, Shoulson I: Economic impact of successful protective therapy for Parkinson's disease (abstract) *Annals Neurol* 1988; 24:153.
5. Shoulson I and the Parkinson Study Group. Deprenyl in early Parkinson's disease: symptomatic versus protective efficacy (abstract). *Neurology* (Suppl. 1) 1990; 40:153.
6. Oakes D and the Parkinson Study Group. Progression of early Parkinson's disease until levodopa therapy is required (abstract). *Neurology* (Suppl. 1) 1990; 40:370.
7. Environmental Influences Working Group of the Parkinson Study Group and The Parkinson Study Group (CM Tanner, Presenter, Chicago, IL): Smoking and Age at Onset of Parkinson's Disease: Analysis of the DATATOP Cohort (abstract). *Annals Neurol* 1990; 28:295.
8. The Parkinson Study Group (PG Como, Presenter, Rochester, NY): Effect of

*: Publication subsequent to promotion to Professor

†: Brin is primary or senior author

- Deprenyl on Neuropsychological Function in Early Parkinson's Disease (abstract). *Annals Neurol* 1990; 28:297.
9. Hall WJ, Oakes D and the Parkinson Study Group. Statistical issues in monitoring a 2 x 2 factorial clinical trial (abstract). *Controlled Clinical Trials* 1990; 11:264.
 10. Oakes D, McDermott M, Eberly S, Plumb S, Watts A, Shoulson I and the Parkinson Study Group. Investigator effects in a multicenter trial for Parkinson's disease (abstract). *Controlled Clinical Trials* 1990; 11:284.
 11. Pelusio RM, Rudolph A, Orme C, Evans P, Plumb S, Oakes D, Shoulson I and the Parkinson Study Group. DATATOP: Managing an accelerated trial (abstract). *Controlled Clinical Trials* 1990; 11:304.
 12. Kieburtz K, Como P, McDermott M and the Parkinson Study Group. Neuropsychological evaluation in early untreated Parkinson's disease (abstract). *Annals of Neurology* 1990; 28:236.
 13. LeWitt PA, Galloway M, Oakes D, Watts A, Mattson W and the Parkinson Study Group; Homovanillic acid, other monoamine metabolites, and xanthine in parkinsonian CSF, (abstract), *Neurology* 1991; 41 (Suppl 1): 379.
 14. Pelusio RM, Miller C, Orme C, Andrews M, Casaceli C, Lieou J, Kieburtz K, Wixsom J, Shoulson I, and the Parkinson Study Group. Use of Computer Applications to Facilitate Retroactive Updates to a Database (abstract). *Controlled Clinical Trials* 1991; 12:707.
 15. LeWitt P, Galloway M, Matson W, McDermott M, Oakes D, and the Parkinson Study Group. Markers of endogenous dopamine synthesis in Parkinson's disease (abstract). *Neurology* 1992; 42 (Suppl 3):421.
 16. Pelusio RM, Wixsom J, Rudolph A, Orme C, Shoulson I, and the Parkinson Study Group. Subject file checklists to facilitate clinical trial closeout activities (abstract). *Controlled Clinical Trials* 1992; 13:438.
 17. LeWitt P, Galloway M, Matson W, Milbury P, McDermott M, Oakes D, the Parkinson Study Group. CSF studies in untreated Parkinson disease: dopamine metabolism and xanthine. *Neurosci Abstracts* 1992; 18:1248.
 18. Parkinson Study Group. Assessment of short-term tolerability of lazabemide (Ro 19-6327) in untreated Parkinson's disease (abstract). *Movement Disorders* 1992; 7 (Suppl 1):14.
 19. McDermott MP, Jankovic J and the Parkinson Study Group. Factors predictive of

*: Publication subsequent to promotion to Professor

- the need for levodopa therapy in early, untreated Parkinson's disease (abstract). *Neurology* 1992; 42 (Suppl 3):441.
20. Fink JS, Shalish C, Hotamosligil G, Rould E, Sullivan J, Growdon J, LeWitt P, Breakefield XO, the Parkinson Study Group. Allelic variations in the MAO-A and MAO-B genes in Parkinson disease (abstract). *Movement Disorders* 1992; 7:289-290.
 21. LeWitt PA, Bannon M, Galloway M, Kapatos G, Matson W, McDermott M, Oakes D, the Parkinson Study Group. Monoaminergic metabolism, substance P, met-enkephalin, and biopterin metabolism in Parkinson's disease (abstract). *Neurology* 1993; 43:A408.
 22. Rudolph A, Pelusio RM, McManus J, Bordwell KL, Kieburtz K, Dorflinger E, Shoulson I and the Parkinson Study Group. Promoting enrollment in a multi-center clinical trial (abstract). *Controlled Clinical Trials* 1993; 14:438.
 23. Pelusio RM, Casaceli CJ, Orme C, Connorton J and the Parkinson Study Group. Monitoring completion of data form discrepancies (abstract). *Controlled Clinical Trials* 1993; 14:429.
 24. Parkinson Study Group (J Penney, primary author). Effect of sustained deprenyl and tocopherol therapy in levodopa-treated parkinsonian patients (abstract). *Annals Neurol* 1993; 34:247.
 25. Parkinson Study Group (I Shoulson, primary author). The impact of extended deprenyl treatment in patients not requiring levodopa therapy (abstract). *Annals Neurol* 1993; 34:263.
 26. Parkinson Study Group (S Fahn, primary author). The DATATOP study: cerebrospinal fluid homovanillic acid changes in patients with mild, early parkinsonism (abstract). *Movement Disorders* 1993; 8:410-411.
 27. Parkinson Study Group (K Kieburtz, primary author). Controlled trial of lazabemide in levodopa-treated Parkinson's disease (abstract). *Movement Disorders* 1993; 8:411.
 28. Hyland K, Bottiglieri T, Engle T, LeWitt PA, the Parkinson Study Group. Pteridine and S-adenosylmethionine concentrations in CSF from unmedicated parkinsonians and controls (abstract). *Neurology* 1994; 44 (suppl 2):A154.
 29. Casaceli C, Sotack J, Orme C, Rudolph A, Kieburtz K and the Parkinson Study Group. Electronic events coding (abstract). *Controlled Clinical Trials* 1994; 15:89.

*: Publication subsequent to promotion to Professor

30. Orme C, Casaceli C, Randolph H, Rudolph A and the Parkinson Study Group. Verification and tracking of records in a clinical trial database (abstract). *Controlled Clinical Trials* 1994; 15:92.
31. LeWitt P, Aizenman E, Newcomer T, Loeffler D and the Parkinson Study Group. The search for an endogenous neurotoxin in Parkinson's disease: TOPA and TOPA-quinone (abstract). *Mov Disord* 1994; 9:482.
32. LeWitt P, Oakes D, Cui L, and the Parkinson Study Group. Endpoints for the study of Parkinson's disease progression (abstract). *Mov Disord*. 1994; 9:480.

*: Publication subsequent to promotion to Professor

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